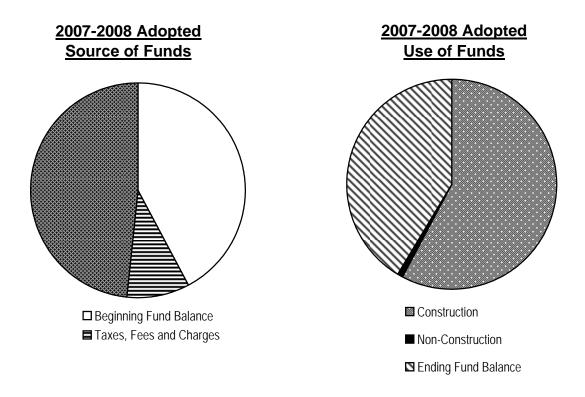
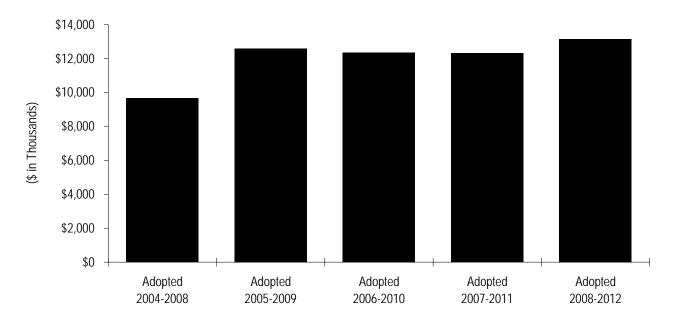
COMMUNICATIONS CAPITAL PROGRAM 2008-2012 Capital Improvement Program



CIP History



2008-2012 Adopted Capital Improvement Program

Overview

Introduction

In October 1990, the City assumed the responsibility of providing its own emergency communications service for police and fire from the County of Santa Clara. Communications Capital Improvement Program (CIP) was set up to address the replacement and upgrade of both the public safety and non-public safety radio equipment. The inventory of equipment that is supported by this program consists of approximately 25 fixed-equipment sites, 100 base stations, 980 mobile radios and 1,940 portable radios. The 2008-2012 Adopted CIP provides funding of \$13.2 million, of which \$9.8 million is allocated in 2007-2008.

This program is part of the Strategic Support City Service Area (CSA) and supports the following outcomes from that CSA: Safe and Functional Public Infrastructure, Facilities and Equipment; and Effective Use of State-of-the-Art Technology. In addition, the program supports one outcome in the Public Safety CSA: The Public Feels Safe Anywhere, Anytime in San José.

Program Priorities and Objectives

The Communications CIP's guiding objective is the provision of reliable, necessary public safety and non-public safety-related communications equipment for all City employees who need this equipment for their jobs.

Based on the CSA outcomes supported by this program, the following list of priorities has been developed:

 Proactively replace public safety-related communications equipment and systems to ensure reliability and optimal performance, and compliance with rules of the Federal Communications Commission.

- Maintain existing radio equipment in a proactive manner to ensure optimal functionality and to extend the length of service; and
- Strategically plan for future major upgrades and technology changes.

A significant portion of the Communications CIP is allocated to equipment replacement and upgrades, which support each of the three priorities. This allocation provides funding to replace communications equipment over the next five years after careful study and planning. The life of the City's current equipment has been extended as a result of a proactive maintenance schedule. The equipment, nevertheless, will eventually outlive its useful life and the costs of repairing outmoded equipment in some cases have begun to overtake the costs of replacing it.

The City of San José is the lead agency in a microwave radio network project, called "E-COMM", with 75% funding via a Community Oriented Policing Services (COPS) Federal Grant. A project manager was assigned in 2006-2007 to review the final design and initiate an implementation strategy that would allow for the replacement of the City of San José's existing analog microwave network, and also allow direct connectivity to and from all other 9-1-1 dispatch centers within the County of Santa Clara Operational All appropriate engineering services environmental studies have been and completed, and the system's design has been finalized. The General Services Department plans to award vendor contracts and move forward with construction in 2007-2008.

2008-2012 Adopted Capital Improvement Program

Overview

Program Priorities and Objectives (Cont'd.)

Since the COPS Federal Grant is a reimbursable grant, federal revenue in the amount of \$4.8 million is planned for 2007-2008. This is a change from the 2007-2011 CIP which had assumed that the grant would be fully expended in 2006-2007.

In 2007-2008, a trunking radio feasibility study will be conducted. Trunking, which is a way of using a set of frequencies in a more efficient manner than the traditional way, is used by many government entities that share a finite amount of radio spectrum. A trunked radio system is a radio system used to maximize available capacity in a two-way radio system. Groups of users are given a logical talkgroup to share for their communications, rather than a dedicated radio frequency. Until the study is completed and results are analyzed, the replacement of over 400 radio modems and base stations, as well as the establishment of a proposed citywide two-way radio network for Animal Services has been deferred. The impact of the deferral of radio modems is expected to be minimal as the General Services Department plans to recycle units from vehicles removed from service. It is anticipated that this study will result in a trunking radio system implementation plan that will include site preparation frequency coordination information, as well as detailed cost estimates. In addition, this study may identify cost effective alternatives to traditional radio infrastructure that improve the level of reliable mobile data services that are offered, with the integration of additional wireless technology.

Radio Communication industry standards are shifting to take advantage of existing trunking

technologies. Trunking will enable the City to use of existing radio efficient frequencies and utilize the upcoming 700 MHz band, prioritize communications to ensure that Police and Fire transmissions take precedence, as well as maximize the Fire Department's utilization of the new Radio Infrastructure system, scheduled to be fully implemented in November 2007. efficient use of existing frequencies is important because additional frequencies are not available and services to support the growing population continue to increase demand on the system. Additionally, trunking is required in order to provide interoperability with other Bay Area agencies and to interface with technology that will be supported by Urban Area Security Initiative (UASI) grant funding. Trunking would also allow the recording of transmissions on all channels, enabling play back for safety and debriefing purposes.

The purchase and installation of equipment to make radio sites simulcast-ready was approved for 2007-2008. Whereas currently the dispatcher must determine from which base station to transmit for a given incident in order to ensure that the transmission is successfully, this technological improvement will enable the simultaneous transmission of a single channel to occur from more than one base station, greatly expanding the transmitter coverage zone and eliminating the risk of making an incorrect base station Simulcasting is required for the selection. City's multi-base station system to move to a trunking system.

Sources of Funding

The Communications CIP receives 3.4% of the City's Construction and Conveyance

2008-2012 Adopted Capital Improvement Program

Overview

Sources of Funding (Cont'd.)

(C&C) Tax. Approximately 98% of this tax is derived from a transfer tax imposed upon each transfer of real property with the remaining 2% generated from a construction tax levied on most types of construction. For the 2008-2012 CIP, it is assumed that collections allocated to the Communications Capital Program will fall to \$918,000 in 2007-2008 (from the current year estimate of \$1,156,000) and will level off at \$850,000 annually for each of the remaining years of the As anticipated in prior budgets, the softening of the local real estate market has begun and continues to negatively impact C&C collections, which had experienced record growth over the past several years. C&C collections experienced declines in 12 out of the 13 months preceding June 2007, when compared to the same months in the prior year. This budget assumes that the housing market will continue to soften and C&C tax receipts will stabilize at a lower and more sustainable level over the next five years.

Program Highlights

<u>Communications Equipment Replacement & Upgrade</u>

As already highlighted, a majority of the Communications Capital Program budget is dedicated to equipment replacement and These funds keep the City's upgrade. communications sites, base stations, and approximately 6,700 mobile radios, portable radios, and mobile data systems functioning The existing core radio and up-to-date. equipment system and infrastructure was installed in 1990 and has an estimated 10-year life cycle for public safety equipment and 15cycle non-public safety year life for

equipment. The replacement of these systems started in 2005-2006, and is scheduled for completion in 2008-2009. When current equipment becomes due for replacement, the General Services Department plans to replace this equipment with trunking radio system equipment. Therefore, in order to maximize current equipment usage, a reallocation of funding was approved from the Communications Equipment Replacement and Upgrade appropriation to the City-Wide Trunking Radio System Project.

Major Changes from the 2007-2011 Adopted CIP

Simulcast Sites

The Simulcast Sites project approved for 2007-2008 will provide equipment to make radio sites simulcast-ready and will vastly improve the transmitter coverage zone. This equipment is not included in the COPS grant, and is complimentary to that project. Simulcast site preparation is necessary to provide sufficient Fire and Police radio coverage city-wide.

<u>Trunking Feasibility Study and City-Wide</u> <u>Trunking Radio System Project</u>

The Trunking Feasibility Study will look at the feasibility of developing a trunked radio system in which groups of users are given a logical talk-group to share for their communications, rather than a dedicated radio frequency. Radio frequencies are in short supply and a trunked radio system would maximize available capacity in a two-way radio system, thus increasing capacity without adding frequencies. Additionally, this study will help determine how best to utilize the Fire Department's new Radio Infrastructure

2008-2012 Adopted Capital Improvement Program

Overview

Major Changes from the 2007-2011 Adopted CIP (Cont'd.)

Trunking Feasibility Study and City-Wide Trunking Radio System Project (Cont'd.)

system. The Feasibility Study is planned for 2007-2008 with the City-Wide Trunking Radio System Project planned to begin in 2009-2010.

Fire Station 22 Radio Site

This project, planned for 2008-2009, will build a radio site at Fire Station 22 to alleviate voice and data coverage issues.

City-Wide SCADA System Feasibility Study

A feasibility study for a City-Wide Supervisory Control and Data Acquisition (SCADA) system is planned for 2008-2009. SCADA is a telemetry system that can be used to remotely control systems such as park irrigation, flood control, and well level monitoring. A cost savings is expected to result from a common telemetry system as multiple phone line usage will be used less frequently, and the cost to maintain current subsystems will no longer be needed.

Operating Budget Impact

It is anticipated that there will be no additional operating and maintenance costs associated with projects included in the 2008-2012 Adopted CIP.

Council Approved Revisions to the Proposed Capital Improvement Program

During the June Budget hearings, the City Council approved a rebudget for the COPS 2003-2004 Interoperable Communications Grant in the amount of \$4.7 million.

2008-2012 Adopted Capital Improvement Program Source of Funds

COURCE OF FUNDS	Estimated 2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	5-Year Total
SOURCE OF FUNDS							
General Fund							
Contributions, Loans and Transfers from: General Fund							
 COPS 2003-2004 Interoperable Communications Grant 	200,630	4,717,718					4,717,718
Total General Fund	200,630	4,717,718					4,717,718
Communications Construction & Conveyance Tax Fund							
Beginning Fund Balance Taxes, Fees & Charges:	4,377,464	4,120,560	4,044,560	4,095,560	3,127,560	1,591,560	4,120,560 *
Construction and Conveyance Tax Reserve for Encumbrances	1,156,000 116,096	918,000	850,000	850,000	850,000	850,000	4,318,000
Total Communications Construction & Conveyance Tax Fund	5,649,560	5,038,560	4,894,560	4,945,560	3,977,560	2,441,560	8,438,560 *
TOTAL SOURCE OF FUNDS	5,850,190	9,756,278	4,894,560	4,945,560	3,977,560	2,441,560	13,156,278 *

^{*} The 2008-2009 through 2011-2012 Beginning Balances are excluded from the FIVE-YEAR TOTAL SOURCE OF FUNDS to avoid multiple counting of the same funds.

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Communications Capital Program

2008-2012 Adopted Capital Improvement Program

Use of Funds

USE OF FUNDS	Estimated 2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	5-Year Total
Construction Projects							
City-Wide Trunking Radio				1,100,000	1,000,000	1,000,000	3,100,000
System				.,,	.,000,000	.,000,000	3,133,000
Fire Radio Infrastructure System	460,000						
Fire Station 22 Radio Site			150,000				150,000
Police Dispatch Voting Receivers	310,000						
COPS 2003-2004 Interoperable Communications Grant	200,630	4,717,718					4,717,718
Communications Equipment Replacement and Upgrade	757,000	405,000	592,000	700,000	1,362,000	1,134,000	4,193,000
3. Public Art		9,000	7,000	18,000	24,000	21,000	79,000
4. Simulcast Sites		500,000					500,000
Total Construction Projects	1,727,630	5,631,718	749,000	1,818,000	2,386,000	2,155,000	12,739,718
Non-Construction							
General Non-Construction							
CIP Action Team	1,000						
City-Wide SCADA System Feasibility Study			50,000				50,000
5. Trunking Radio System Feasibility Study		80,000					80,000
Total General Non-Construction	1,000	80,000	50,000				130,000
Contributions, Loans and Transfe	ers to Special Fu	nds					
City Hall Debt Service Fund	1,000						
Total Contributions, Loans and Transfers to Special Funds	1,000						
Total Non-Construction	2,000	80,000	50,000				130,000

2008-2012 Adopted Capital Improvement Program

Use of Funds

USE OF FUNDS (CONT'D.)	Estimated 2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	5-Year Total
TOTAL USE OF FUNDS	5,850,190	9,756,278	4,894,560	4,945,560	3,977,560	2,441,560	13,156,278*

^{*} The 2007-2008 through 2010-2011 Ending Balances are excluded from the FIVE-YEAR TOTAL USE OF FUNDS to avoid multiple counting of same funds.

2008-2012 Adopted Capital Improvement Program

	(001)	(397)	Total	
	General Fund	Communications Construction & Conveyance Tax Fund		
TOTAL RESOURCES	4,717,718	5,038,560	9,756,278	
Construction Projects				
COPS 2003-2004 Interoperable Communications Grant	4,717,718		4,717,718	
2. Communications Equipment Replacement and Upgrade		405,000	405,000	
3. Public Art		9,000	9,000	
4. Simulcast Sites		500,000	500,000	
	4,717,718	914,000	5,631,718	
Total Construction Projects Non-Construction	4,717,718	914,000	5,631,718	
 Trunking Radio System Feasibility Study 		80,000	80,000	
		80,000	80,000	
Total Non-Construction		80,000	80,000	
Ending Fund Balance		4,044,560	4,044,560	
TOTAL USE OF FUNDS	4,717,718	5,038,560	9,756,278	

2008-2012 Adopted Capital Improvement Program Detail of Capital Projects

1. COPS 2003-2004 Interoperable Communications Grant

CSA: Strategic Support Initial Start Date: 4th Qtr. 2004

CSA Outcome: Effective Use of State-of-the-Art Technology **Revised Start Date:** 2nd Qtr. 2005

Department:General ServicesInitial Completion Date:4th Qtr. 2005Council District:City-wideRevised Completion Date:2nd Qtr. 2008

Location: City-wide

Description: This allocation provides funding for upgrading the microwave network for the City of San José and

Santa Clara County and establishing microwave links in North, South and West areas of Santa Clara

County to provide complete communications coverage.

Justification: The ability to provide services to the City and County requires the upgrade of the City's

communication equipment. San José, in conjunction with the Silicon Valley Regional Interoperability Project Group (SVRIP), prepared a grant application which demonstrated how the funding will help all agencies in the Santa Clara County region achieve interoperability among the fire service, law enforcement and emergency medical service communities. The grant will reduce the reliance on the General Fund and/or the Construction and Conveyance Tax Fund for the costs of the upgrade and

replacement.

		EXPENDITURE SCHEDULE (000'S)										
Cost Elements	Prior Years	2006-07 Appn.	2006-07 Estimate	2007-08	2008-09	2009-10	2010-11	2011-12	5-Year Total	Beyond 5-Year	Project Total	
Equipment		4,918	201	4,718					4,718		4,918	
TOTAL		4,918	201	4,718					4,718		4,918	
			FUN	IDING SO	URCE SC	HEDULE ((000'S)					
General Fund		4,918	201	4,718					4,718		4,918	
TOTAL		4,918	201	4,718					4,718		4,918	

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

None

Notes:

 FY Initiated:
 2003-2004
 Redevelopment Area:
 N/A

 Initial Project Budget:
 \$4,818,000
 SNI Area:
 N/A

 Appn. #:
 6073
 USGBC LEED:
 N/A

2008-2012 Adopted Capital Improvement Program Detail of Capital Projects

2. Communications Equipment Replacement and Upgrade

CSA: Strategic Support Initial Start Date: Ongoing

CSA Outcome: Effective Use of State-of-the-Art Technology **Revised Start Date:**

Department: General Services Initial Completion Date: Ongoing

Council District: City-wide Revised Completion Date:

Location: City-wide

Description: This allocation funds the replacement of communications equipment based upon useful life

expectancy. Funding is allocated for the replacement of extensive fixed point (base station) radio

equipment at five sites in 2007-2008 and four sites in 2008-2009.

Justification: This allocation funds essential communications equipment for Police, Fire, and non-public safety city

operations.

			=	XPENDIT	URE SCH	EDULE (0	00'S)				
Cost Elements	Prior Years	2006-07 Appn.	2006-07 Estimate	2007-08	2008-09	2009-10	2010-11	2011-12	5-Year Total	Beyond 5-Year	Project Total
Equipment		2,146	757	405	592	700	1,362	1,134	4,193		
TOTAL		2,146	757	405	592	700	1,362	1,134	4,193		
			FUN	IDING SO	URCE SC	HEDULE ((000'S)				
Communications Construction & Conveyance Tax Fund		2,146	757	405	592	700	1,362	1,134	4,193		
TOTAL		2,146	757	405	592	700	1,362	1,134	4,193		

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

N/A

Notes:

Project schedule, dates, and selected budget information are not provided due to the ongoing nature of this project.

For the 2008-2012 CIP, funding for this purpose has been decreased by \$1.8 million. This funding has been allocated to the City-wide Trunking Radio System Project.

FY Initiated: Ongoing Redevelopment Area: N/A
Initial Project Budget: SNI Area: N/A
Appn. #: 4056 USGBC LEED: N/A

2008-2012 Adopted Capital Improvement Program Detail of Capital Projects

3. Public Art

CSA: Strategic Support Initial Start Date: Ongoing

CSA Outcome: Safe and Functional Public Infrastructure, Facilities, **Revised Start Date:**

and Equipment Initial Completion Da

and Equipment Initial Completion Date: Ongoing

Department: General Services

Council District: City-wide Revised Completion Date:

Description: This allocation funds the construction and administration of public art in the Communications Capital

Program. In compliance with the Council adoption of the revised Public Art Master Plan on March 13, 2007, one percent of all construction project funding is required to be allocated to public art, excluding funding for seismic and ADA retrofits, maintenance and operations, non-construction projects (such as studies), projects that are primarily rehabilitation or maintenance of existing facilities, or affordable housing. Projects where public art allocations were previously programmed or appropriated are not subject to the revisions of the Public Art Master Plan. Expenditures in this allocation will be subject to the legal revenue restrictions for the use of this funding on public art.

Justification: This allocation is required to comply with the revisions to the Public Art Master Plan adopted by the

City Council on March 13, 2007.

City-wide

			=	XPENDIT	URE SCH	EDULE (0	00'S)				
Cost Elements	Prior Years	2006-07 Appn.	2006-07 Estimate	2007-08	2008-09	2009-10	2010-11	2011-12	5-Year Total	Beyond 5-Year	Project Total
Public Art				9	7	18	24	21	79		
TOTAL				9	7	18	24	21	79		
			FUN	IDING SO	URCE SC	HEDULE ((000'S)				
Communications Construction & Conveyance Tax Fund				9	7	18	24	21	79		
TOTAL				9	7	18	24	21	79		

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Location:

Major Changes in Project Cost:

N/A

Notes:

Project schedule, dates, and selected budget information are not provided due to the ongoing nature of this project.

FY Initiated: Ongoing Redevelopment Area: N/A
Initial Project Budget: SNI Area: N/A
Appn. #: 5953 USGBC LEED: N/A

2008-2012 Adopted Capital Improvement Program

Detail of Capital Projects

4. Simulcast Sites

CSA: Strategic Support Initial Start Date: 2nd Qtr. 2008

CSA Outcome: Effective Use of State-of-the-Art Technology **Revised Start Date:**

Department: General Services Initial Completion Date: 1st Qtr. 2009

Council District: City-wide Revised Completion Date:

Location: City-wide

Description: This allocation provides funding for the purchase of equipment which will make radio sites simulcast-

ready and vastly improve the transmitter coverage zone.

Justification: This project is necessary to provide sufficient Fire and Police radio coverage city-wide.

	EXPENDITURE SCHEDULE (000'S)										
Cost Elements	Prior Years		2006-07 Estimate	2007-08	2008-09	2009-10	2010-11	2011-12	5-Year Total	Beyond 5-Year	Project Total
Equipment				500					500		500
TOTAL				500					500		500
			FUN	IDING SO	URCE SC	HEDULE ((000'S)				
Communications Construction & Conveyance Tax Fund				500					500		500
TOTAL				500					500		500
			ANNUA	L OPERA	TING BUD	GET IMP	ACT (000'	S)			

None

Major Changes in Project Cost:

None

Notes:

 FY Initiated:
 2007-2008
 Redevelopment Area:
 N/A

 Initial Project Budget:
 \$500,000
 SNI Area:
 N/A

 Appn. #:
 6108
 USGBC LEED:
 N/A

2008-2012 Adopted Capital Improvement Program Detail of Capital Projects

5. Trunking Radio System Feasibility Study

CSA: Strategic Support Initial Start Date: 3rd Qtr. 2007

CSA Outcome: Effective Use of State-of-the-Art Technology **Revised Start Date:**

Department: General Services Initial Completion Date: 4th Qtr. 2007

Council District: City-wide Revised Completion Date:

Location: City-wide

Description: This allocation provides funding for a trunking radio system feasibility study. A trunked radio system

maximizes available capacity in a two-way radio system. Groups of users are given a logical

talkgroup to share for their communications, rather than a dedicated radio frequency.

Justification: The City has been unable to acquire additional frequencies to accommodate the increased public

safety communication needs. Trunking is used by many government entities to provide two-way communication for fire and police departments, and other municipal services, who all share a finite

amount of available radio spectrum.

	EXPENDITURE SCHEDULE (000'S)										
Cost Elements	Prior Years	2006-07 Appn.	2006-07 Estimate	2007-08	2008-09	2009-10	2010-11	2011-12	5-Year Total	Beyond 5-Year	Project Total
Master Plan/Study				80					80		80
TOTAL				80					80		80
			FUN	IDING SO	URCE SC	HEDULE ((000'S)				
Communications Construction & Conveyance Tax Fund				80					80		80
TOTAL				80					80		80
			ANINILIA	LODEDA		OET IMP	AOT (000)	0)			

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

None

Notes:

 FY Initiated:
 2007-2008
 Redevelopment Area:
 N/A

 Initial Project Budget:
 \$80,000
 SNI Area:
 N/A

 Appn. #:
 6109
 USGBC LEED:
 N/A

2008-2012 Adopted Capital Improvement Program

Summary of Projects that Start after 2007-2008

Project Name: City-Wide SCADA System

Feasibility Study

5-Year CIP Budget: \$50,000

Total Budget: \$50,000

USGBC LEED N/A

Description: This project funds a feasibility study for a city-wide Supervisory Control and Data

Acquisition (SCADA) system for the Municipal Water System, parks irrigation, and

Council District: City-wide

Estimated End Date: 2nd Qtr. 2009

Estimated Start Date: 4th Qtr. 2008

storm pump stations utilizing the existing city-wide paging system.

Project Name: City-Wide Trunking Radio System

Council District: City-wide \$3,100,000 Estimated Start Date: 3rd Qtr. 2009 5-Year CIP Budget:

Total Budget: \$3,100,000 Estimated End Date: TBD

USGBC LEED N/A

Description: This project will provide the infrastructure for a trunked radio system that maximizes

available capacity in a two-way radio system, increasing capacity without adding The Trunking Feasibility Study is expected to provide more detail regarding the timeline and costs of this project. The estimated end date for the City-Wide Trunking Radio System project will be identified upon completion of the feasibility

study.

Project Name: Fire Station 22 Radio Site Council District: City-wide

5-Year CIP Budget: \$150,000 Estimated Start Date: 2nd Qtr. 2009 **Total Budget:** \$150,000 Estimated End Date: 1st Qtr. 2010

USGBC LEED N/A

Description: This project provides funding to build a radio site at Fire Station 22 which will provide

voice and data equipment coverage in Almaden Valley.